



Name: Class:

Task 1

A family is setting up their home wireless network. Devices that will be used on the network include smartphones and laptops.

(a) Name **one** item of networking equipment that all the other devices will connect to.

(b) Name **one** item of networking equipment that will be present in all devices to allow them to connect wirelessly to the network.

(c) Some of the devices are running slowly on the network.

Why might this be the case?

Task 2

1. Encryption: Caesar cipher

Use the table below to create a shift cipher of your own. Write an encrypted message and pass it on to your neighbour to see if they can easily crack the key.

A	B	C	D	E	F	G	H	I	J	K	L	M
B	C	D	E	F	G	H	I	J	K	L	M	N
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
O	P	Q	R	S	T	U	V	W	X	Y	Z	A



2. Below is a substitution cipher alphabet created from a keyword. The keyword is written down followed by the remaining unused letters of the alphabet. Duplicate letters in the keyword or phrase are ignored.

A	B	C	D	E	F	G	H	I	J	K	L	M
E	N	C	R	Y	P	T	I	O	A	B	D	F
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
G	H	J	K	L	M	Q	S	U	V	W	X	Z

- (a) Now use this cipher to encode a short phrase. Pass it to your neighbour to decode.
- (b) Is this cipher stronger or weaker than the Caesar cipher? Why?

3. There are a number of different standards that are used in the encryption of wireless networks. These include WEP, WPA, WPA2 and WPS.

Research different standards of encryption that are used and record your findings below.
